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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,239	09/24/2003	Junsaku Nakajima	49954 DIV-2 (70551)	8142
21874	7590	12/16/2005	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			TRAN, THANG V	
			ART UNIT	PAPER NUMBER
			2653	
DATE MAILED: 12/16/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/671,239	NAKAJIMA ET AL.	
	Examiner	Art Unit	
	Thang V. Tran	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 34-36 and 38-40 is/are rejected.
- 7) ☒ Claim(s) 37 and 41 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/606,282.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 34, 35, 38 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohtomo et al (US 5,822,294).

Regarding claim 34, Ohtomo et al, according to Fig. 7, discloses an optical disc reproducing device reproducing an optical disc (see Fig. 11) having pits of at least two different depths formed therein, comprising: a photoreceptor element (110 in Fig. 7) detecting a light beam reflected from the optical disc; a servo signal generating unit generating a tracking servo signal (push-pull signal) based on the quantity of the reflected light beam detected by the photoreceptor element; and a polarity inverting unit (see column 9, line 51 to column 10, line 13) inverting polarity of the tracking servo signal generated by the servo signal generating unit based on a result of detection by a pit depth detecting unit (see column 9, line 51 to column 10, line 13).

Regarding claim 35, see column 9, line 51 to column 10, line 13.

Regarding claim 38 and 39, see Fig. 7 and 13 and their respective disclosure for limitations recited in these claims.

3. Claims 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugiyama (US 4,980,877).

Regarding claim 34, Sugiyama, according to Figs. 1-6, discloses an optical disc reproducing device (see Fig. 1a) reproducing an optical disc having pits (70 and 71) of at least two different depths (see column 3, lines 52-56) formed therein, comprising: a photoreceptor element (5) detecting a light beam reflected from the optical disc; a servo signal generating unit (see 42-48 in Fig. 6) generating a tracking servo signal based on the quantity of the reflected light beam detected by the photoreceptor element; and a polarity inverting unit (90) inverting polarity of the tracking servo signal generated by the servo signal generating unit based on a result of detection by a pit depth detecting unit (see Fig. 5b).

Regarding claim 35, see Fig. 5 which shows the pit depth detecting unit detects depth of the pit formed in said optical disc based on a signal indicative of a difference in intensity distribution of the reflected light beam along a tangential direction of a pit string on the optical disc.

Regarding claim 36, see Fig. 5 which shows the pit depth detecting unit includes a first detecting unit (97) detecting a first signal based on the quantity of reflected light beam from the optical disc, a second detecting unit (98) detecting a second signal indicative of the difference in intensity distribution of the reflected light beam along the tangential direction of the pit string on said optical disc, and a third detecting unit (93, 94) detecting the depth of the pit formed in said optical disc based on the first signal detected by the first detecting unit (97) and the second signal detected by the second detecting unit (98).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama et al. (US 4,980,877) in view of Kuroda et al. (US 6,181,657).

Sugiyama, according to Figs. 1-6, discloses an optical system including all features of the instant claimed invention (see the rejection above) except for the use of a tracking generating unit as recited in claims 38 and 39 and the photoreceptor element as recited in claims 40 and 41. Kuroda et al., according to Fig. 5a, teaches the use of the tracking generating unit in which a tracking error signal (see Fig. 5a) is generated by detecting a phase difference between quantity of reflected light (A+D and B+C) detected by the photoreceptor element 33 as recited in claim 38, or by detecting a difference between quantity of reflected light on an inner side and outer side (A+D and B+C) of the disk detected by the photoreceptor element 33 as recited in claim 39, and the photoreceptor element 33 is divided into four (A,B,C and D) along a tangential direction and a radial direction as recited in claim 40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the photoreceptor element and the tracking generating unit in the system of Sugiyama with the photoreceptor element and the tracking generating unit as taught by Kuroda et al in order to accurately detect the tracking error signal.

Allowable Subject Matter

6. Claims 37 and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 37 and 41 are allowed over the prior art of record because the prior art of record, fails to suggest or fairly teach an optical disc reproducing device including a combination of all limitations as particularly recited in each of claims 37 and 41.

Cited References

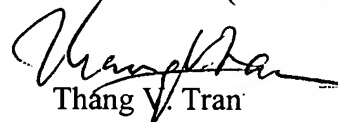
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references relate to an optical apparatus having a tracking controller for changing a polarity of a tracking error signal based on a change of a depth of pits recorded on a recording medium.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thang V. Tran whose telephone number is (571) 272-7595. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2653

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thang V. Tran
Primary Examiner
Art Unit 2653